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<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/056,038	HAYAKAWA, TOSHIRO	
	<b>Examiner</b>	<b>Art Unit</b>	
	Tuan N Nguyen	2828	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 09/15/2004.
2. ☒ The allowed claim(s) is/are 1-22.
3. ☒ The drawings filed on 25 February 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |  |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                                    |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date <u>11/10/2004</u> . |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>10/04/2004</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment  |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                                 | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance                           |
|  | 9. <input type="checkbox"/> Other _____.   |

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below, to the amended claims 1, 2, 6, 7, 10, 11, 12, 14, 15, and 18 should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Ms. Susan Perng Pan (Attorney for Applicant, Reg. No. 41,239) on 11/10/2004.

In the claims:

1. (currently amended): A light source apparatus equipped with a GaN type semiconductor light emitting element, comprising

a GaN type semiconductor light emitting element;

a spatial filter for eliminating stray light from the light emitted from the GaN type semiconductor light emitting element, wherein

said stray light amounts to 20% or less of the total output of the light emitted from said GaN type semiconductor light emitting element when said GaN type semiconductor light emitting element is driven at the maximum output thereof,

the GaN type semiconductor light emitting element has an active layer having stripe portions,

the stray light is randomly polarized light emitted from portions of the semiconductor light emitting element other than the stripe portions of the active layer, and

the stray light is cutoff by one of a slit panel and a pinhole panel.

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2. (Currently Amended): A light source apparatus equipped with a GaN type semiconductor light emitting element as defined in claim 1, further comprising

a focusing optical system for focusing the light emitted from the GaN type semiconductor light emitting element, wherein

the spatial filter is formed of ~~a~~the slit panel or ~~a~~the pinhole panel disposed adjacent to the convergence position of the light focused by the focusing optical system.

6. (Currently Amended): A method of eliminating stray light comprising the step of emitting light from a GaN type semiconductor light emitting element;

eliminating, by use of a spatial filter, stray light from the light emitted from the light source apparatus equipped with the GaN type semiconductor light emitting element; wherein

said stray light amounts to 20% or less of the total output of the light emitted from said GaN type semiconductor light emitting element when said GaN type semiconductor light emitting element is driven at the maximum output thereof,

the GaN type semiconductor light emitting element has an active layer having stripe portions,

the stray light is randomly polarized light emitted from portions of the semiconductor light emitting element other than the stripe portions of the active layer, and

the stray light is cutoff by one of a slit panel and a pinhole panel.

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7. (Currently Amended): ~~A method of eliminating stray light as defined in claim 6~~ A method of eliminating stray light comprising the step of  
emitting light from a GaN type semiconductor light emitting element;  
eliminating, by use of a spatial filter, stray light from the light emitted from the light source  
apparatus equipped with the GaN type semiconductor light emitting element; wherein  
said stray light amounts to 20% or less of the total output of the light emitted from said GaN type  
semiconductor light emitting element when said GaN type semiconductor light emitting element is driven  
at the maximum output thereof, wherein and  
the stray light is stray light that is generated when the drive current of the GaN type semiconductor light emitting element is less than the laser oscillation threshold value.

10. (Currently Amended): ~~A light source apparatus equipped with a GaN type semiconductor light emitting element as defined in claim 2~~ A light source apparatus equipped with a GaN type semiconductor light emitting element, comprising  
a GaN type semiconductor light emitting element;  
a spatial filter for eliminating stray light from the light emitted from the GaN type semiconductor light emitting element, wherein  
said stray light amounts to 20% or less of the total output of the light emitted from said GaN type semiconductor light emitting element when said GaN type semiconductor light emitting element is driven  
at the maximum output thereof, further comprising  
a focusing optical system for focusing the light emitted from the GaN type semiconductor light emitting element, wherein  
the spatial filter is formed of a slit panel or a pinhole panel disposed adjacent to the convergence position of the light focused by the focusing optical system, wherein and  
the stray light is stray light that is generated when the drive current of the GaN type semiconductor light emitting element is less than the laser oscillation threshold value.

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11. (Currently Amended): ~~A light source apparatus equipped with a GaN type semiconductor light emitting element as defined in claim 3~~ A light source apparatus equipped with a GaN type semiconductor light emitting element, comprising

a GaN type semiconductor light emitting element;

a spatial filter for eliminating stray light from the light emitted from the GaN type semiconductor light emitting element, wherein

said stray light amounts to 20% or less of the total output of the light emitted from said GaN type semiconductor light emitting element when said GaN type semiconductor light emitting element is driven at the maximum output thereof, further comprising

a focusing optical system for focusing the light emitted from the GaN type semiconductor light emitting element, wherein

the spatial filter is formed of a partially reflective mirror that partially reflects the light near the convergence position of the light focused by the focusing optical system, wherein and

the stray light is stray light that is generated when the drive current of the GaN type semiconductor light emitting element is less than the laser oscillation threshold value.

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12. (Currently Amended): ~~A light source apparatus equipped with a GaN type semiconductor light emitting element as defined in claim 4~~ A light source apparatus equipped with a GaN type semiconductor light emitting element, comprising

a GaN type semiconductor light emitting element;

a spatial filter for eliminating stray light from the light emitted from the GaN type semiconductor light emitting element, wherein

said stray light amounts to 20% or less of the total output of the light emitted from said GaN type semiconductor light emitting element when said GaN type semiconductor light emitting element is driven at the maximum output thereof,

the spatial filter is a polarization element that eliminates the light components other than the TE mode components of the light emitted from the GaN type semiconductor light emitting element, and,  
wherein

the stray light is stray light that is generated when the drive current of the GaN type semiconductor light emitting element is less than the laser oscillation threshold value.

14. (Currently Amended): A method of eliminating stray light comprising the steps of  
equipping a light source apparatus with a GaN type semiconductor light emitting element;  
providing the light source with a spatial filter; and  
eliminating, by use of the stray filter, stray light from the emitted light, wherein  
the stray light amounts to 20% or less of the total output of the light emitted from the GaN type semiconductor light emitting element when the GaN type semiconductor light emitting element is driven at the maximum output thereof,

the GaN type semiconductor light emitting element has an active layer having stripe portions,

the stray light is randomly polarized light emitted from portions of the semiconductor light emitting element other than the stripe portions of the active layer, and

the stray light is cutoff by one of a slit panel and a pinhole panel.

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15. (Currently Amended): ~~A method of eliminating stray light as defined in claim 14~~ A method of eliminating stray light comprising the steps of

equipping a light source apparatus with a GaN type semiconductor light emitting element;

providing the light source with a spatial filter; and

eliminating, by use of the stray filter, stray light from the emitted light, wherein

the stray light amounts to 20% or less of the total output of the light emitted from the GaN type semiconductor light emitting element when the GaN type semiconductor light emitting element is driven at the maximum output thereof, wherein and

the stray light is stray light that is generated when the drive current of the GaN type semiconductor light emitting element is less than the laser oscillation threshold value.

18. (Currently Amended): ~~A light source apparatus equipped with a GaN type semiconductor light emitting element as defined in claim 2~~ A light source apparatus equipped with a GaN type semiconductor light emitting element, comprising

a GaN type semiconductor light emitting element;

a spatial filter for eliminating stray light from the light emitted from the GaN type semiconductor light emitting element, wherein

said stray light amounts to 20% or less of the total output of the light emitted from said GaN type semiconductor light emitting element when said GaN type semiconductor light emitting element is driven at the maximum output thereof, further comprising

a focusing optical system for focusing the light emitted from the GaN type semiconductor light emitting element, wherein

the spatial filter is formed of a slit panel or a pinhole panel disposed adjacent to the convergence position of the light focused by the focusing optical system, wherein

the GaN type semiconductor light emitting element has an active layer having stripe portions, further wherein

the stray light is randomly polarized light emitted from portions of the semiconductor light emitting element other than the stripe portions of the active layer, further wherein and

the stray light is cutoff by the slit panel.



## REASON FOR ALLOWANCE

### *Allowable Subject Matter*

2. The following is an examiner's statement of reasons for allowance - Applicant's response filed on 03/03/2004 has been considered, with respect to claims 1, 6, 7, 10, 11, 12, 14, 15, 18 references of the record fail to teach or suggest:

Claims 1,6,14:

A light apparatus and method of eliminating stray light comprising GaN light emitting having stray light from portion other than the active layer cutoff by a pinhole panel, wherein the stray light amount to 20% or less when the GaN is driven at maximum output and filter via a spatial filter.

Claims 7,12,15:

A light apparatus and method of eliminating stray light comprising GaN light emitting having stray light amount to 20% or less when the stray light is generated when the GaN drive current is less than the laser oscillation threshold value and the GaN semiconductor is driven at maximum output, and eliminated via spatial filter.

Claims 10,11,18:

A light apparatus for eliminating stray light comprising GaN light emitting, a focusing optical system, a spatial filter is either partial reflective mirror or a pin-hole, where stray light amount to 20% or less is generated when GaN semiconductor is driven at maximum



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output, and the stray light is stray light is generated when the GaN drive current is less than the laser oscillation threshold value.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### *Communication Information*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan N Nguyen whose telephone number is (571) 272-1948. The examiner can normally be reached on M-F: 7:30 - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harvey Minsun can be reached on (703) 308-16741. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tuan N. Nguyen

